Runhe(Leo) Lu

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EDUCATION

2019 - 2021	**UNIVERSITY OF SOUTHERN CALIFORNIA**	**Los Angeles, CA**
	Master of Science in Computer Science	

2017 - 2019	**UNIVERSITY OF MICHIGAN (3.74/4.0)**	**Ann Arbor, MI**
	Bachelor of Science in Computer Science(data science track)	

SKILLS

- Java, Python, JavaScript, CSS, HTML, SQL, C++, React.js, Flask, MySQL
- Machine Learning, Data Structure & Algorithm, Database, Web Development

WORK EXPERIENCE

09.2018 – 12.2018   **SCHOOL OF INFORMATION, UNIVERSITY OF MICHIGAN**   **Ann Arbor, MI**

Software Development Engineer & Research Assistant **(Python, JavaScript)**

- Developed 2 **user interfaces** and 6 **extensions** via **bootstrap** for **Jupyter Notebook**, which lets mentors design, test, and publish their questions and quizzes.
- Designed 2 relational **database** structure using **MySQL** to store the mentors' questions and students' answers, and backend REST API using Python Flask
- Deployed 3 versions of backend APIs and frontend extensions on **AWS**. Over 100 students are using these extensions on course: https://www.coursera.org/specializations/data-science-python

PROJECTS

2018   **Map Reduce System (Python)**

https://github.com/leolurunhe/Mapreduce-System

- Project aimed at implementing a **MapReduce server** in Python
- Designed a single machine, **multi-threaded** server that will execute user-submitted MapReduce jobs
- Master listens for MapReduce jobs, manages the jobs, distributes work amongst the workers, and handles faults. Workers modules register themselves with the master, and then await commands, performing map, reduce or sorting (grouping) tasks based on instructions given by the master

2018   **Insta485 - a Instagram like website (JavaScript, Python, CSS, HTML)**

https://github.com/leolurunhe/insta485-web

- Developed a web application that allows users to upload, edit, and share pictures using **React.js, HTML, CSS**
- Implemented a relational database using **mySQL** storing users' photos and personal info. Using tokens and passwords to verify users' identities
- Implemented **REST** APIs with **flask** to establish an interface between web back-ends and front-ends

2018   **Wikipedia Search Engine (JavaScript, Python, CSS, HTML)**

https://github.com/leolurunhe/Wiki-search-Engine

- A search website shows US colleges based on **TF-IDF** page ranking algorithm based wikipedia
- Calculating TF-IDF page ranking and filtering stop words using **Hadoop Mapreduce**
- Building python APIs and **react.js** front-end to show searched results in TF-IDF ranking

2018   **Budget Checker (Java, Android)**

https://github.com/leolurunhe/Budget-Tracker-for-android

- An **android app** to help checking users' monthly budget
- Designed a layout via **XML** to show detailed budget and allow user adding memos, and a calculator helping users to know their total budget
- Sort all monthly budget based on year, month, day, tied with budget amount